

FLOJET®

Model 6000 Series 5 Chamber High Flow Pump

INSTALLATION & SERVICE INFORMATION

FLOJET 6000 Series pumps are designed for a wide range of applications and are constructed from a selection of materials suitable for handling a broad range of chemicals. The 5 chamber high flow pumps are self-priming and can run dry without harm. They are intended for intermittent duty cycles but can be run continuously for short periods of time. The higher the duty cycle, the shorter the expected life of the pump. Typical uses include transfer, delivery, spraying, cooling, filtration, dispensing, and pressure boosting.

OPERATION

To start and prime the pump, the discharge line must be opened to allow trapped air to escape, thus avoiding the potential of airlock. For demand models, the pressure switch will shut off the pump automatically when the discharge valve is closed and the pressure has risen to the switch OFF set point. The pressure switch will restart the pump when a valve is opened and the discharge line pressure drops to the ON set point of the pressure switch. For bypass models, apply power to the pump, and open the discharge valve to expell air in the line.

DEMAND OPERATION (intermittent duty)

Pump models fitted with a pressure switch are known as demand pumps. The pressure switch is preset to shut off the pump motor automatically when a specific pressure is reached, such as in closed discharge conditions. The pressure switch turns the pump motor on automatically as the pressure drops, such as when the discharge is opened. Demand operation is considered an "intermittent duty" application. The maximum intermittent duty cycle is that which will cause the motor to reach its maximum thermal limits. Once the maximum thermal limit is reached, the motor must be allowed to settle to a lower (ideally ambient) temperature, before resuming operation. Running the pump at or near the maximum thermal limit for an extended period of time will shorten the life of the pump and may result in immediate pump failure. Demand pump models feature an integral pressure switch that automatically turns the pump off/on in response to open/closed discharge conditions.

BYPASS OPERATION (if equipped)

Models equipped with an external bypass system are designed to pump at high pressures while at low or high flow rates. Models equipped with bypass only must be turned off/on manually, or by an independent control device. Models equipped with a bypass only will continue to run until the power is manually turned off.

The 6000 Series pumps are not recommended for continuous duty service due to limited motor brush life. Operation at lower pressures and temperatures, however, will extend overall pump service life.

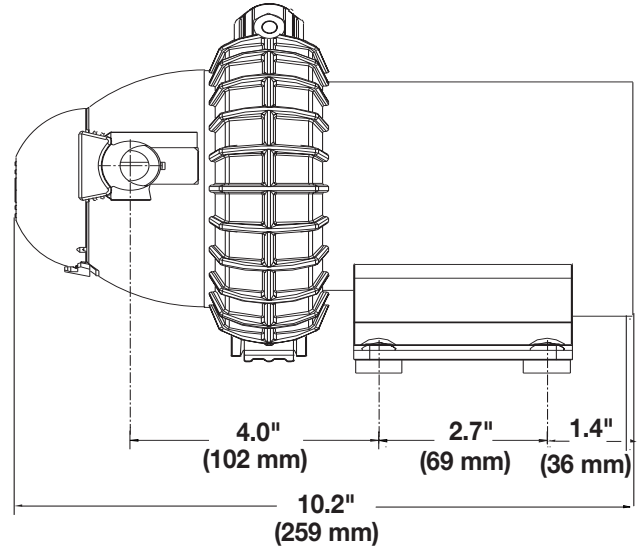
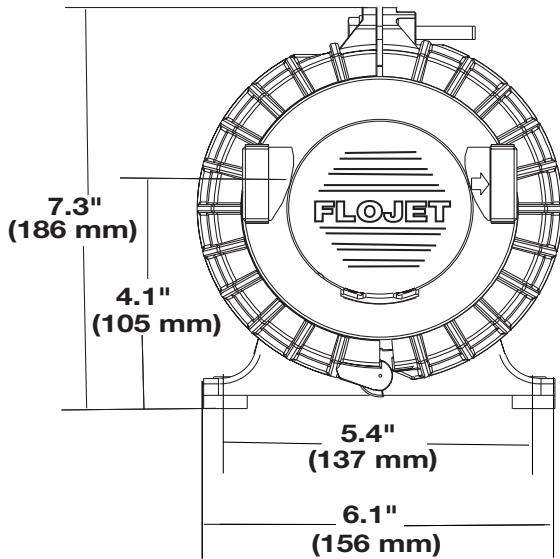


SPECIFICATIONS

Pump Design:	5 chamber diaphragm
Motor Design:	Permanent magnet DC
Voltages:	12, 24 VDC
Motor rating:	IP 54 (splash proof)
Amp Draw:	13.5 amps @ 10 psi for 12 VDC 6.8 amps @ 10 psi for 24 VDC
Fuse Size (A):	30 for 12 VDC 15 for 24 VDC
Pump Body:	Glass filled Nylon
Elastomers:	
Diaphragm	Santoprene™
Check valves	EPDM
Max. Flow Rate:	7.5 GPM (28 LPM)
Max. Pressure:	60 psi (4.2 bar)
Liquid Temp:	40° F (5° C) Min 140° F (60° C) Max*
Duty Cycle:	Intermittent
Weight:	9.5 lbs (4.3 kg) max.
Wiring Options:	Standard 15" leads
Certifications:	CE
Port Size inlet/outlet:	3/4" HB

* Consult factory for higher fluid temperature options

Dimensional Drawing



MOUNTING

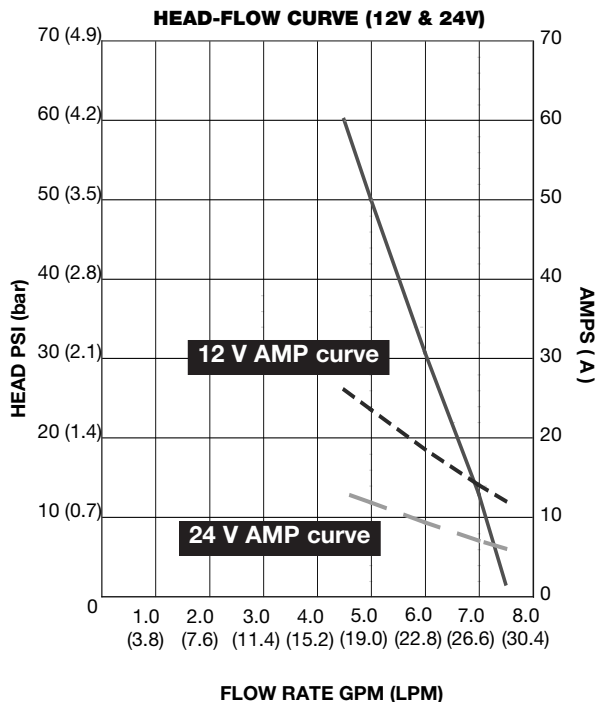
The 6000 Series pumps are self-priming and may be located above or below the water supply in a dry location. To vertically mount these units, it is best to do so with the motor on top. This will prevent water dripping on the motor in the event of a leak. Place pump on a solid surface and secure with the four mounting screws; be careful not to compress the rubber grommets, which act as vibration dampers.



IF YOU ARE NOT FAMILIAR WITH APPLICABLE ELECTRICAL STANDARDS, HAVE THE UNIT INSTALLED BY A QUALIFIED ELECTRICIAN.

WARNING

Risk of an electrical shock!



WIRING

Suggested wiring information is given as a reference only.

STEP 1

Determine the distance from the power source to the pump and then double the measurement. Wire gauge installation is determined on the entire run length, to the pump and back.

STEP 2

Connect to power supply lead (red (+)) to the positive (+) terminal on the battery or through a properly installed fuse/circuit breaker panel. Then run the length of wire to the pump, connecting the red wire through a switch appropriately rated to the pump's current requirements.

STEP 3

Route the wire so as not to create hazards in operation of the engine, movement of steering components or human traffic.

STEP 4

Connect the red lead to the red/orange lead on the pump.

STEP 5

Connect the black lead from the pump to the ground or negative power side (-) of the vessel.

STEP 6

Turn the system off when not in use for extended periods of time or when the water supply tank is empty.

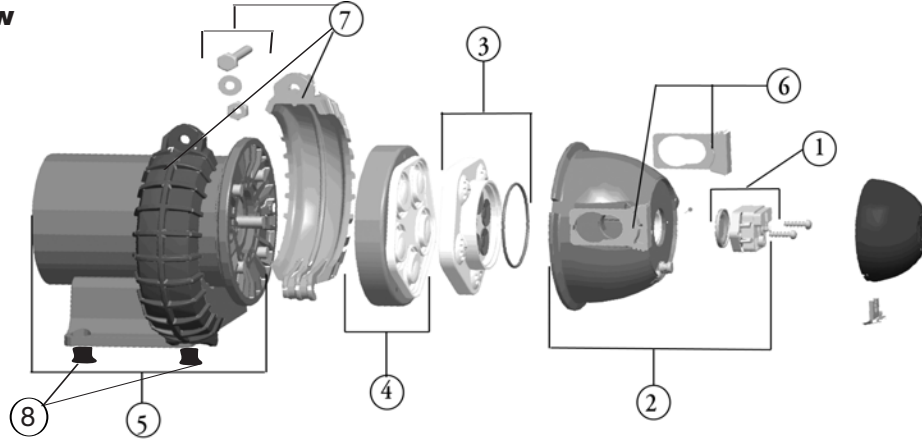
STEP 7

After installation, check voltage at the pump motor. Voltage should be checked when pump is operating. Full voltage must be available at the pump motor at all times for proper pump operation and pump motor life.

CAUTION MOTOR CASE COULD GET HOT DURING EXTENDED OPERATION. PROLONGED CONTACT WITH SKIN MAY CAUSE A BURN.

WARNING: BEFORE SERVICING PUMP, TURN OFF POWER TO PUMP AND DRAIN SYSTEM!!

Exploded View



Service Parts

Key	Description	Part Number
1	Pressure Switch Assembly (60 PSI)	02090760
2	Upper Housing Assembly (Nylon)	20404736
3	Check Valve Assembly (EPDM)	20407730
4	Lower Housing Assembly (Santoprene™)	20419330
5	Motor With Baseplate 12V 24V	R2009050A R2019050A
6	Port Clips (2)	20408700
7	Clamp Assembly	20409700
8	Grommets (4)	20132000

DISASSEMBLE

Pump Housing

1. Disconnect power to the pump motor.
2. Remove the pressure switch cover and remove the two wire leads from the switch spade connectors.
3. Remove the clamp bolt and clamps.
4. Remove the upper housing from the check valve and diaphragm/lower housing assemblies.

Check Valve Assembly

(To replace check valve only follow steps 1 through 6)

5. The check valve chamber and o-ring are located on the diaphragm/lower housing assembly.
6. Remove the check valve chamber subassembly from the diaphragm/lower housing subassembly (pull the valve chamber from the diaphragm).

Diaphragm/Cam/Lower Housing Assembly

7. Remove the diaphragm/lower housing assembly from the motor front end bell adapter.

Motor Replacement

8. To replace the motor only, follow steps 1 - 7, removing the entire pump head; then assemble pump head onto new motor.
9. Install the two clamps with the bolt head on the suction side. Torque the bolt when there is less than a 1/4" gap between the clamps.

REASSEMBLE

Pressure Switch Assembly

1. Install the switch diaphragm into upper housing.
Note: Check the old diaphragm for the material mark located in the center of the diaphragm. V is for VITON, E is for EPDM and B is for Buna. Select the correct material for the installation of a new diaphragm.
2. Install the switch body over the diaphragm, align the screw holes and install the two mounting screws.
3. Reinstall the two wires onto the spade connectors, then install the switch cover and screw.

Check Valve Assembly

4. Install the o-ring into the o-ring groove located on the discharge side of the check valve chamber assembly.
5. Install the check valve chamber assembly into the diaphragm, aligning the check valve chamber with the diaphragm seal walls (push in to secure to the diaphragm).

Upper Housing Assembly

6. With the check valve chamber sub assembly installed on the diaphragm, place the upper housing assembly onto the pre-assembled lower housing sub assembly.
7. Align the cam with the motor "D" shaft and motor list, then slide the cam into the pump head assembly and onto the motor shaft (lube the motor shaft with a small amount of light grease).
8. Check the discharge location (see arrow on front of port) for correct port orientation (discharge right is the standard position).

Motor Assembly

10. Install the pump head by following steps 6 through 9.

PUMP TROUBLESHOOTING CHART

Failure to prime - motor operates, but no pump discharge

- Debris in pump;
- Defective check valve assembly;
- Air leak in intake line;
- Restricted intake or discharge line;
- Punctured diaphragm (pump leaks);
- Crack in pump housing (pump leaks);
- Empty water supply tank

Motor fails to run

- Pump circuit has no power;
- Loose or corroded wiring connection;
- Blown fuse or open breaker;
- Open thermal protector (motor shell hot);
- Defective motor

Low flow or pressure

- Under-sized plumbing or long runs;
- Defective motor;
- Loose or corroded electrical connections;
- Inadequate wire gauge

Remedy

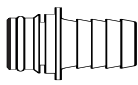
Remove upper-housing and clean
 Replace check valve assembly
 Tighten all clamps, inspect plumbing
 Remove lines and inspect
 Replace lower housing assembly
 Replace housing or pump head
 Refill or turn off power to pump

Check wiring, fuse or breaker
 Inspect wire connections
 Replace or reset
 Wait 20 to 30 minutes for auto reset
 Replace motor. Inspect plumbing for leaks

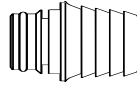
Increase plumbing I.D.
 Replace motor
 Inspect wire connections
 Inspect wire gauge

ACCESSORIES

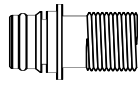
6000 SERIES PORT FITTINGS



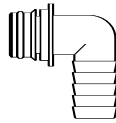
20381-700
 (1 PAIR)
 PORT
 HOSE BARB
 STRAIGHT-EP



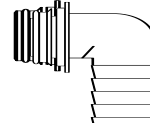
20381-701
 (1 PAIR)
 PORT
 HOSE BARB
 STRAIGHT-EP



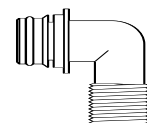
20381-704
 (1 PAIR)
 PORT
 1/2" - 14 QEST
 STRAIGHT-EP



20381-710
 (1 PAIR)
 PORT
 HOSE BARB
 90° ELBOW-EP



20381-711
 (1 PAIR)
 PORT
 HOSE BARB
 90° ELBOW-EP



20381-714
 (1 PAIR)
 PORT
 1/2" - 14 MALE QEST
 90° ELBOW-EP

WINTERIZING

Allowing water to freeze in the system may result in damage to the pump and plumbing system.

Non-toxic antifreeze for potable water may be used with Flojet pumps. Follow manufacturer's recommendations. Do not use automotive antifreeze to winterize potable water systems. These solutions are highly toxic and may cause serious injury or death if ingested.

1. Drain the water and open tank. Open tank drains. You may use the pump to drain the tank by opening all the valves in the system. Allow the pump to operate until the tank is empty. Do not operate the pump more than 15 minutes continuously dry.
2. Open all valves and purge the water from the plumbing system. Turn power to the pump off. Be sure that all the water from the drain lines are drained.
3. Remove quick-connect inlet and outlet fittings from the pump and turn the pump on to pump out remaining water from the pump head. Be sure to have a catch pan or a rag under the pump to prevent water from spilling. Turn the pump off once the plumbing is empty. Leave the fittings disconnected from the pump until the system is ready to be used again. Make a note on your tank filler that the plumbing is not connected.

RETURN PROCEDURE

Prior to returning any product to **FLOJET**, call customer service for an authorization number. This number must be written on the outside of the shipping package. Place a note inside the package with an explanation for return as well as the authorization number. Include your name, address and phone number. MSDS required.

PRODUCT WARRANTY

FLOJET warrants this product to be free of defects in material and/or workmanship for a period of one year after purchase by the customer from **FLOJET**. During this one year warranty period, **FLOJET** will, at its option and at no charge to the customer, repair or replace this product if found defective. No product will be accepted for return without a return material authorization number. All return goods must be shipped with transportation charges prepaid. This is only a summary of our Limited Warranty. For a copy of our complete warranty, please request Form No. 100-101.



Engineered for life

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